

Amendment and Response

Applicant: Jerome D. Brown et al.

Serial No.: 10/681,851

Filed: October 8, 2003

Docket No.: 10386US01 (201.179.101)

Title: TAPE REEL ASSEMBLY WITH STIFF WINDING SURFACE FOR A TAPE DRIVE SYSTEM**REMARKS**

The following remarks are responsive to the Non-Final Office Action mailed October 17, 2006. In that Office Action, claim 36 was rejected under 35 U.S.C. § 112, first paragraph, and claims 1, 9-11, 14, 35, and 37-40 were rejected under 35 U.S.C. § 112, second paragraph. In addition, claims 1, 10, 14, 26-29, 31, 35, 36, 37, 39, 41, 43, and 44 were rejected under 35 U.S.C. § 102(b) as anticipated, or alternatively under 35 U.S.C. § 103 as obvious, over Weyrich et al., U.S. Patent No. 3,485,456 ("Weyrich"), and claims 1, 10, 13, 14, 26-29, 31, 35, and 38 were rejected under 35 U.S.C. § 103(a) as unpatentable over admitted prior art in view of Weyrich.

Claims 11, 30, 40, and 42 were objected to but viewed by the Examiner to include allowable subject matter, which is noted with appreciation.

With this Response, claims 35 and 40 have been cancelled, claim 45 is newly presented, and claims 1, 26, 36-37, 41-42, and 44 have been amended. Claims 1, 10-11, 14, 26-31, 36-39, and 41-45 remain pending in the application and are presented for consideration and allowance.

Claim Rejection under 35 U.S.C. § 112, First Paragraph

Applicants note with appreciation that claim 36 is no longer withdrawn from consideration.

Claim 36 was rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Examiner takes the position that the disclosure does not provide a sufficient explanation as to how many windings are needed to achieve the effective radial modulus. In particular, the Examiner states that it appears that when no tape is wound onto the hub, then the effective radial modulus is zero.

With this Response, independent claim 36 has been amended to provide a data storage tape cartridge including a housing defining an enclosed region, at least one tape reel assembly rotatably disposed within the enclosed region and including: a hub including a cup shaped backbone that defines an annular inner surface substantially parallel to a tape winding surface, where winding of the storage tape onto the hub applies a stress that deflects the tape winding

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surface, and further where the cup shaped annular backbone configures the tape winding surface to have an effective radial modulus of greater than 0.3 million pounds-per-square-inch.

In specific response to the Examiner's query stated at page 2, claim 36 requires winding of the storage tape onto the hub. Thus, the particular case in which no storage tape is wound onto the hub is not claimed by claim 36.

It is respectfully submitted that one reasonably skilled in the tape reel assembly art could make or use the invention of amended independent claim 36 based upon the disclosure and the specification without undue experimentation. In particular, and with specific reference to the Examiner's position stated at page 2, amended independent claim 36 requires the winding of the storage tape onto the hub that applies a **stress** that deflects the tape winding surface. One of ordinary skill in the tape reel assembly art will understand that even one winding of one length of storage tape onto the hub has the potential to deflect (**strain**) the tape winding surface, and this deflection is related to the applied stress (the winding) through the effective radial **modulus**. Moreover, enablement is unambiguously satisfied by amended independent claim 36, which further provides the cup shaped annular backbone configures the tape winding surface to have an effective radial modulus of greater than 0.3 million pounds-per-square-inch. Thus, claim 36 is believed to be in full compliance with the enablement requirement under 35 U.S.C. § 112, first paragraph.

It is respectfully requested that the rejection to claim 36 under 35 U.S.C. § 112, first paragraph, be withdrawn.

Claim Rejections under 35 U.S.C. § 112, Second Paragraph

Claims 1, 9-11, 14, 35, and 37-40 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. The Examiner takes the position that claims 1, 35, 36, and 37 are vague and indefinite.

In order to comply with the requirements of 35 U.S.C. § 112, second paragraph, a claim must satisfy two requirements: (1) it must set forth what the Applicant regards as his invention and (2) the claims must particularly point out and distinctly define the metes and bounds of the

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subject matter claimed. *See, e.g., Solomon v. Kimberley-Clarke Corp.*, 55 USPQ2d 1279, 1282 (Fed. Cir. 2000); MPEP §2171.

The MPEP advises that “a rejection based on the failure to satisfy requirement (1) is appropriate only where applicant has stated, somewhere other than in the application as filed, that the invention is something different than what is defined by the claims.” MPEP §2172(I) (emphasis added). Thus, no basis exists for rejecting any of the pending claims under requirement (1) of 35 U.S.C. § 112, second paragraph.

Regarding requirement (2), an “[a]pplicant may use functional language ... or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought.” MPEP §2173.01 (emphasis added) (citing *In re Swinehart*, 439 F.2d 210, 160 USPQ 226 (CCPA 1971)). The clarity of the claim language must be evaluated according to the understanding of one having ordinary skill in the art in view of the application disclosure and the prior art. *In re Moore*, 439 F.2d 232, 235, 169 USPQ 236, 238 (CCPA 1971).

It is believed that the amendment to independent claim 1 submitted with the response on July 3, 2006 has already rendered independent claim 1 to be in full compliance with 35 U.S.C. § 112, second paragraph. In any regard, with this Response, independent claim 1 is amended to provide a tape reel assembly including a hub including a core defining an inner surface and a tape winding surface, the inner surface extending between opposing sides of the hub parallel to the tape winding surface, where at least a portion of the inner surface includes a metal insert.

Based upon the above, it is believed that amended independent claim 1, and claims 10-11 and 14 that depend from claim 1, make clear what the boundaries are of the claimed subject matter, are definite, and in form for allowance.

With this Response, claim 35 has been cancelled.

With this Response, independent claim 37 has been amended to provide a hub defining an inner surface opposite a tape winding surface, the inner surface comprising a metal backbone that defines a cup shaped annular insert including an annular wall substantially parallel to the tape winding surface. It is believed that amended independent claim 37, and claims 38-39 that depend from claim 37, make clear what the boundaries are of the claimed subject matter, are definite, and in form for allowance.

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Based on the above, it is respectfully requested that the rejections to claims 1, 9-11, 14, 35, and 37-40 under 35 U.S.C. § 112, second paragraph be withdrawn.

Claim Rejections under 35 U.S.C. §§ 102 and 103

Claims 1, 10, 14, 26-29, 31, 35, 36, 37, 39, 41, 43, and 44 were rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative under 35 U.S.C. § 103(a) as obvious, over Weyrich.

The Examiner has interpreted the hub 12 of Weyrich to have a tape winding surface 22 and an inner surface opposite of the tape winding surface 22 that is defined in part by a side of an opening 44 formed within hub 12. The graphical depiction provided by the Examiner at page 4 is noted with appreciation.

The independent claims of the pending invention define over Weyrich, and certain of the independent claims have been amended to recite portions of the allowable subject matter. For example, amended independent claim 1 requires a hub including a core defining an inner surface and a tape winding surface, **the inner surface extending between opposing sides of the hub parallel to the tape winding surface, where at least a portion of the inner surface includes a metal insert.** The inner surface on the hub 12 of Weyrich as identified by the Examiner does not extend between opposing sides of the hub parallel to the tape winding surface. The inner rim 20 identified by Weyrich might be viewed as extending between opposing sides of the hub, but this interpretation fails to teach or suggest at least a portion of the inner surface including a metal insert, as required by amended independent claim 1.

Amended independent claim 26 requires an annular hub including a core that defines a tape winding surface, and a metal backbone that defines a major inner surface opposite the tape winding surface, **where the metal backbone extends an entire distance between opposing sides of the hub.** It is respectfully submitted that Weyrich, under any interpretation, fails to teach or suggest a metal backbone that defines a major inner surface, where the metal backbone extends an entire distance between opposing sides of the hub.

Amended independent claim 37 requires a hub defining an inner surface opposite a tape winding surface, the inner surface including a metal backbone **that defines a cup shaped**

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annular insert including an annular wall substantially parallel to the tape winding surface.

Dependent claim 38 further defines amended independent claim 37, and requires the metal backbone defines a drive washer and a driver. It is respectfully submitted that Weyrich fails to teach or suggest limitations of claims 37 and/or 38.

Amended independent claim 41 requires a hub including a **metal cup shaped annular backbone defining an annular inner surface wall**, and a plastic core coupled to the backbone and defining a tape winding surface. In this regard, independent claim 41 recites a portion of the allowable subject matter of claim 42 that has been deemed by the Examiner to define over the cited references.

Based upon the above, it is respectfully submitted that claims 1, 10, 14, 26-29, 31, 35, 36, 37, 39, 41, 43, and 44 are not anticipated under 35 U.S.C. § 102(b) by Weyrich.

Claims 1, 10, 13, 14, 26-29, 31, 35, and 38 were rejected under 35 U.S.C. § 103(a) as unpatentable over admitted prior art in view of Weyrich. The admitted prior art is cited by the Examiner as disclosing a hub having an effective radial modulus of 0.19 Msi. In any regard, Weyrich (described above) fails to cure the deficiencies of the admitted prior art such that the combination, even if a motivation to combine existed, would not result in the instant claimed tape reel assembly.

In addition, Weyrich discloses at column 3, lines 21-27 that the hub 12 is made of a rigid molded plastic material, such as ABS, and the metal insert 26 is provided interior to the hub 12. In this regard, the inner rim 20 of Weyrich is a plastic surface. None of the cited references provide a motivation for modifying Weyrich to include at least a portion of the inner surface having a metal insert, as required by amended independent claim 1; or a metal backbone extending an entire distance between opposing sides of the hub, as required by amended independent claim 26; or a cup shaped annular backbone that defines an annular inner surface substantially parallel to the tape winding surface, as required by amended independent claim 36; or a metal backbone that defines a cup shaped annular insert having an annular wall substantially parallel to the tape winding surface, as required by amended independent claim 37; or a metal cup shaped annular backbone defining an annular inner surface wall, as required by amended independent claim 41.

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For all of the above reasons, the pending claims cannot be rendered obvious under 35 U.S.C. § 103(a) over Weyrich, alone or in combination with the admitted prior art.

Allowable Subject Matter

The Examiner objected to claims 11, 30, 40, and 42 for being dependent upon a rejected base claim, but deemed these claims to be allowable if rewritten in independent form including all limitations of the base claim and any intervening claims, which is noted with appreciation.

CONCLUSION

In view of the above, Applicants respectfully submit that pending claims 1, 10-11, 14, 26-31, 36-39, and 41-45 recite patentable subject matter, are in form for allowance, and are not taught or suggested by the cited references. Allowance of the pending claims is respectfully requested.

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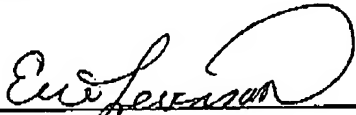
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No fees are required under 37 C.F.R. 1.16(h),(i) for the addition of claims. However, if other fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 09-0069.

The Examiner is invited to telephone the Applicants' representative at the below-listed number to facilitate prosecution of this application.

Respectfully submitted,

Date: 1/16/07
Eric D. Levinson
Reg. No. 35,814

IMATION CORP.

Legal Affairs

P.O. Box 64898

St. Paul, Minnesota 55164-0898

Telephone: (651) 704-3604

Facsimile: (651) 704-5951